

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/044215 A2

- (51) International Patent Classification⁷: **C12P 19/42**
- (21) International Application Number:
PCT/EP2003/012701
- (22) International Filing Date:
13 November 2003 (13.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02102580.4 14 November 2002 (14.11.2002) EP
- (71) Applicant (*for all designated States except US*): **DSM IP ASSETS B.V.** [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **BIJL, Hendrik, Louis** [NL/NL]; Insulindestraat 72, NL-3131 ZD Vlaardingen (NL). **SARDJOEPERSAD, Sandjai** [NL/NL]; Zalmforelvijs 8, NL-2492 MR Den Haag (NL).
- (74) Agents: **WRIGHT, Simon, Mark et al.**; J.A. Kemp & Co, 14 South Square, Gray's Inn, London WC1R 5JJ (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/044215 A2

(54) Title: FORMULATIONS COMPRISING VITAMIN B12, METHOD OF PRODUCTION AND USE THEREOF

(57) Abstract: Particles comprising a vitamin B12-containing microbial biomass and a solid carrier and compositions comprising said particles and a method for the production of such particles and compositions.